

PATENT

IN THE UNITED STATES PATENT & TRADEMARK OFFICE

Applicant:	KUCHIBHOTLA)	
)	
Appl. No.	10/680,522)	Examiner C. Appiah
)	
Confirm. No.	505)	Art Unit 2686
)	
Filed:	7 October 2003)	Atty. Docket No. CS23738RL
)	
Title:	"Wireless Radio Network Resource Sharing Among Core Networks And Methods"		

APPEAL BRIEF UNDER 37 C.F.R. § 41.37(c)

Assistant Commissioner for Patents
Alexandria, VA 22313

Sir:

Real Party In Interest

The real party in interest is Motorola Inc., by virtue of an assignment duly executed by the named inventor(s) and recorded in the Patent Office on 15 November 2004 at Reel/Frame: 015985/0342.

Related Appeals & Interferences

There are no related appeals or interferences.

Status of Claims

Claims 1-13 and 18 stand allowed. Claims 29 and 31 were indicated as being allowable. The rejections of Claims 14-17, 26-28, 30, 32, 33 and 35-38 are appealed. A copy of the claims is appended in Appendix A.

Status of Amendments

No amendments have been filed under 37 CFR 1.116 subsequent to the final rejection mailed on 19 June 2006.

Summary of Claimed Subject Matter

The subject matter of independent Claim 14 is drawn to method in a communication device including receiving system information including pointer information indicating where the communication device may obtain information about multiple core networks sharing a common access network from which the system information was received, and attempting to connect to one of the multiple core networks using the information about multiple core networks sharing the common access network from which the system information was received. Page 16, line 7 – page 17, line 6 & FIG. 8.

The subject matter of independent Claim 25 is drawn to a method in a communication device comprising receiving information about multiple core networks sharing a common access network, wherein the information includes at least one of identities of at least some of the multiple core networks sharing the common access network, core network domain information,

information on services supported by at least some of the multiple core networks sharing the common access network, and selecting a core network to which the communication device attempts to connect using the information received. Page 12, line 6 – page 14, line 15 & FIG. 5.

The subject matter of independent Claim 27 is drawn to a wireless communications system information message modulated on a radio frequency carrier, wherein the communications system information message comprises an information block including a data field for a number indicating how many core networks share a common access network. Page 11, lines 3-18, page 16, lines 1- 6 & FIG. 4.

The subject matter of independent Claim 33 is drawn to a wireless network connection request message modulated on a radio frequency carrier, wherein the network connection request message comprises an information block including a data field for indicating that a network entity may select, on behalf of a communication device, one of a plurality of core networks sharing a common access network. Page 15, lines 1-12.

The subject matter of independent Claim 34 is drawn to a method in a communications network entity comprising receiving preferred core network information from a communication device, selecting a core network for the communication device, giving consideration to the preferred core network information received from the communication device when selecting the core network for the communication device. Page 10, lines 3 – 13.

The subject matter of independent Claim 36 is drawn to a method in a communications network entity comprising receiving a communication device identity from a communication device, and selecting a core network from multiple core networks sharing a common access network for the

communication device based on the communication device identity. Page 10,
lines 14- page 11, line 2.

Grounds of Rejection For Review on Appeal

Whether Claims 14-17, 26 and 34-36 are anticipated by U.S.
Publication No. 2002/0193139 (Mildh) under 35 USC 102(e) for anticipation.

Whether Claims 27, 28, 30 and 33 are anticipated by U.S. Patent
No. 6,792,277 (Rajaniemi) under 35 USC 102(e).

Arguments re Mildh

Rejection Summary

Claims 14-17, 26 and 34-36 stand rejected under 35 USC 102(e) for
anticipation by U.S. Publication No. 2002/0193139 (Mildh).

Discussion of Claim 14

Regarding Claim 14, contrary to the Examiner's assertion, Mildh
does not disclose or suggest a

... method in a communication device, the method comprising:
receiving system information,
the system information including pointer information indicating
where the communication device may obtain information about
multiple core networks sharing a common access network from which
the system information was received;

attempting to connect to one of the multiple core networks using the information about multiple core networks sharing the common access network from which the system information was received.

Claim 14 is directed to providing "pointer information" about different core networks that share a common access network. Mildh discloses selecting among different access networks, i.e., GERAN or UTRAN technologies. The various passages of Mildh referenced by the Examiner do not support the asserted rejection. In Mildh, at para. [0009], Mildh discusses providing a mobile station (MS) with operating mode instructions when the MS enters a cell supporting 2G and 3G operation based on MS history. At para. [0010], Mildh discusses network selection hysteresis control. In Mildh, at para. [0015], access network selection (GERAN or UTRAN) is based on registration information in the HLR, wherein the network selects the access technology for the mobile station. At para. [0016], Mildh teaches broadcasting a value indicating which access network (GERAN or UTRAN) the MS should camp on. At para. [0017], Mildh discloses default operating mode rules. At para. [0018], Mildh discloses a network controlled operating mode (2G or 3G) selection for a mobile station, wherein a system information message provides cell specific operating mode selection rules to the mobile station. At para. [0019], Mildh discusses system information messages for communicating the mode selection rules to the mobile stations. At paras. [0029-32], Mildh discusses new system information messages for distributing mode selection rules to mobile stations entering 3G capable cells. Mildh nevertheless fails to disclose a communication device that receives system information "... including pointer information indicating where the communication device may obtain information about multiple core networks sharing a common

access network ..." as in Claim 14. Claim 14 is thus patentably distinguished over Mildh.

Discussion of Claim 15

Regarding Claim 15, Mildh fails to disclose or suggest inc combination with the limitations of Claim 15,

... selecting the one of the multiple core networks to which the communication device attempts to connect using the information about multiple core networks sharing the common access network from which the system information message was received.

In Mildh, at para. [0018], the system information message dictates the mobile stations the mode of operation. There is no pointer information. Claim 15 is thus further patentably distinguished over Mildh.

Discussion of Claim 16

Regarding Claim 16, Mildh fails to disclose or suggest inc combination with the limitations of Claim 14, "... obtaining an identity for the core network to which the communication device attempts to connect using the pointer information." . At para. [0016], Mildh teaches broadcasting a value indicating which access network (GERAN or UTRAN) the MS should camp on. As noted above, Mildh does not send "pointer information". Claim 16 is thus further patentably distinguished over Mildh.

Discussion of Claim 17

Regarding Claim 17, Mildh fails to disclose or suggest in combination with the limitations of Claim 14,

... the system information including a common identity for the multiple core networks sharing the common access network,
attempting to connect to one of the multiple core networks sharing the common access network from which the system information was received upon satisfaction of a condition,
attempting to connect to a core network using the common identity when the condition is not satisfied.

At para. [0016], Mildh teaches broadcasting a value indicating which access network (GERAN or UTRAN) the MS should camp on. At para. [0017], Mildh discloses default operating mode rules. At para. [0017], Mildh discloses default operating mode rules. Contrary to the Examiner's suggestion, Mildh fails to disclose a system information message including a "common identity for the multiple core networks sharing the common access network". Claim 17 is thus patentably distinguished over Mildh.

Discussion of Claim 25

Regarding Claim 25, contrary to the Examiner's assertion, Mildh does not disclose or suggest a

... method in a communication device, the method comprising:
receiving information about multiple core networks sharing a common access network,
the information including at least one of identities of at least some of the multiple core networks sharing the common access network, core network domain information, information on services

supported by at least some of the multiple core networks sharing the common access network;
selecting a core network to which the communication device attempts to connect using the information received.

Mildh discloses selecting among different access networks, i.e., GERAN or UTRAN technologies. The various passages of Mildh referenced by the Examiner do not support the asserted rejection. In Mildh, at para. [0009], Mildh discusses providing a mobile station (MS) with operating mode instructions when the MS enters a cell supporting 2G and 3G operation based on MS history. At para. [0010], Mildh discusses network selection hysteresis control. In Mildh, at para. [0015], access network selection (GERAN or UTRAN) is based on registration information in the HLR, wherein the network selects the access technology for the mobile station. Contrary to the Examiner's assertion, there is no disclosure in Mildh that the mobile station receives "... information including at least one of identities of at least some of the multiple core networks sharing the common access network, core network domain information, information on services supported by at least some of the multiple core networks sharing the common access network" as in Claim 25. Claim 25 is thus patentably distinguished over Mildh.

Discussion of Claim 26

Regarding Claim 26, Mildh fails to disclose or suggest in combination with the limitations of Claim 25, "... receiving the information in response to an unsuccessful core network connection attempt." Mildh does not disclose in a communication device receiving "... information including at least one of identities of at least some of the multiple core networks sharing the

common access network..." let alone receiving such information in response to an unsuccessful network connection attempt. The Examiner does not cite a passage of Mildh in support of the rejection. Claim 26 is thus further patentably distinguished over Mildh.

Discussion of Claim 34

Regarding Claim 34, contrary to the Examiner's assertion, Mildh does not disclose or suggest a

... method in a communications network entity, the method comprising:
receiving preferred core network information from a communication device;
selecting a core network for the communication device;
giving consideration to the preferred core network information received from the communication device when selecting the core network for the communication device.

Mildh discloses selecting among GERAN or UTRAN technologies. According to Mildh, at para., [0015], the selection is based on registration information in the HLR, wherein the network selects the technology for the mobile station. At para. [0035], Mildh alternatively permits the terminal to select the technology based on information stored in a SIM card on the terminal. At para. [0036], in Mildh, the mobile station selects a mode of operation based on its current mode upon entering a new cell. At para. [0037-38], Mildh discusses the BSC control the operating mode of the mobile station. At para. [0039], Mildh discusses when the mode change occurs, e.g., at cell change, location area change, routing area change, service area change. Contrary to the Examiner's assertion Mildh does not disclose receiving "..."

preferred core network information from a communication device" and gives "...consideration to the preferred core network information received from the communication device when selecting the core network for the communication device." Claim 34 is thus patentably distinguished over Mildh.

Discussion of Claim 35

Regarding Claim 35, Mildh fails to disclose or suggest in combination with the limitations of Claim 34, "...receiving the at least one preferred core network from a communication device in a connection request from the communication device." The network in Mildh does not receive "preferred core network information" from the mobile station. Claim 35 is thus further patentably distinguished over Mildh.

Discussion of Claim 36

Regarding Claim 36, contrary to the Examiner's assertion, Mildh does not disclose or suggest a

... method in a communications network entity, the method comprising:
receiving a communication device identity from a communication device;
selecting a core network from multiple core networks sharing a common access network for the communication device based on the communication device identity.

Mildh discloses selecting among GERAN or UTRAN technologies. According to Mildh, at para., [0015], the selection is based on

registration information in the HLR, wherein the network may select the technology for the terminal. At para. [0035], Mildh alternatively permit the terminal to select the technology based on information stored in a SIM card on the terminal. At para. [0009], Mildh discusses furnishing a mobile station with parameter information for selecting the mode of operation of the mobile station in a mixed system comprising multiple core networks. In Mildh, the network entity does not select a core network from multiple core networks sharing a common access network for the communication device "... based on the communication device identity." Mildh is silent on the basis for selecting the operating mode of the mobile station. Claim 36 is thus patently distinguished over Mildh.

Arguments re Rajaniemi

Rejection Summary

Claims 27, 28, 30 and 33 stand rejected under 35 USC 102(e) for anticipation by U.S. Patent No. 6,792,277 (Rajaniemi).

Discussion of Claim 14

Regarding Claim 27, contrary to the Examiner's assertion, Rajaniemi fails to disclose a

... wireless communications system information message modulated on a radio frequency carrier, the communications system information message comprising:

an information block,
the information block including a data field for a number
indicating how many core networks share a common access
network.

The Examiner's references to various passages of Rajaniemi to support the rejection are misplaced. At col. 6, lines 1-5 & line 58 – col. 7, line 3 of Rajaniemi, a cell broadcasts location area identifiers for the location areas of all core networks to which the cell belongs for the purpose of providing location updates to a core network. The location area identifiers of Rajaniemi however are not the same as a "...data field for a number indicating how many core networks share a common access network" as in Claim 27. Claim 27 is thus patentably distinguished over Rajaniemi.

Discussion of Claim 30

Regarding Claim 30, in combination with the limitations of Claim 27, Rajaniemi does not disclose or suggest an "... information block including a pointer to a location where identities for multiple wireless communications core networks sharing a common access network may be obtained." At col. 6, lines 1-5 & line 58 – col. 7, line 3 of Rajaniemi, a cell broadcasts location area identifiers for the location areas of all core networks to which the cell belongs for the purpose of providing location updates to a core network. Contrary to the Examiner's assertion Rajaniemi does not disclose "pointer information". Claim 30 is thus patentably distinguished over Rajaniemi.

Discussion of Claim 30

Regarding Claim 33, Rajaniemi fails to disclose an "... information block including a data field for indicating that a network entity may select, on behalf of a communication device, one of a plurality of core networks sharing a common access network." At col. 6, lines 1-5 & line 58 - col. 7, line 3 of Rajaniemi, a cell broadcasts location area identifiers for the location areas of all core networks to which the cell belongs for the purpose of providing location updates to a core network. Rajaniemi merely discloses sending the location area information. Claim 33 is thus patentably distinguished over Rajaniemi.

Prayer for Relief

Kindly reverse and vacate the rejections of claims, in view of the discussion above, with instructions for the Examiner to allow said Claims to issue in a United States Patent without further delay and provide other relief warranted.

Respectfully submitted,

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Claims Appendix

1. (Original) A method in a communication device, the method comprising:

receiving network system information,

the network system information including information about multiple core networks sharing a common access network without identifying the multiple core networks;

attempting to connect to a core network based on the information about multiple core networks sharing the common access network.

2. (Original) The method of Claim 1,

automatically selecting the core network to which the communication device attempts to connect among the multiple core networks sharing the common access network.

3. (Original) The method of Claim 1,

presenting the multiple core networks for manual selection at the communication device,

changing the order of presentation of the multiple core networks.

4. (Original) The method of Claim 1, attempting to connect to the core network identified by a network entity.

5. (Previously Presented) The method of Claim 1,

the information about the multiple core networks sharing the common access network includes information indicating how many multiple core networks share the common access network,

selecting the core network to which the communication device attempts to connect by selecting one of the multiple core networks without knowing identities of the multiple core networks.

6. (Original) The method of Claim 1,

the information about the multiple core networks sharing the common access network includes a number corresponding to the number of multiple core networks sharing the common access network,

each of the multiple core networks associated with a corresponding number within a range specified by the number of multiple core networks sharing the common access network,

attempting to connect to the core network includes transmitting a message specifying the number associated with the core network to which the communication device attempts to connect.

7. (Previously Presented) The method of Claim 1,

the information about the multiple core networks sharing the common access network includes a number corresponding to the number of multiple core networks sharing the common access network,

each of the multiple core networks associated with a corresponding number within a range specified by the number of multiple core networks sharing the common access network,

at least some of the multiple core networks sharing the common access network having corresponding different core network identities,

attempting to connect to the core network includes transmitting a message specifying the number associated with the core network to which the communication device attempts to connect.

8. (Original) The method of Claim 1,
receiving a connection rejection from the core network to which the communication device attempts to connect,
receiving identities for at least some of the multiple core networks sharing the common access network.

9. (Original) The method of Claim 8, receiving an identity of the core network to which the communication device attempts to connect.

10. (Original) The method of Claim 8, attempting to connect to the core network based on a selection of the core network made at one of the communication device and a network entity.

11. (Original) The method of Claim 1,
receiving network system information includes receiving system information in a wireless broadcast message,
the system information including information about multiple core networks sharing a common radio access network without identifying the multiple core networks;

attempting to connect to a core network based on the system information about multiple core networks sharing the common radio access network.

12. (Original) The method of Claim 1, attempting to connect to the core network includes sending a connection request, the connection request including an identity of a home core wireless communications network of the wireless communication device.

13. (Original) The method of Claim 1, attempting to connect to the core network includes sending a connection request, the connection request including identities of at least some preferred core wireless communications networks.

14. (Original) A method in a communication device, the method comprising:

receiving system information,

the system information including pointer information indicating where the communication device may obtain information about multiple core networks sharing a common access network from which the system information was received;

attempting to connect to one of the multiple core networks using the information about multiple core networks sharing the common access network from which the system information was received.

15. (Original) The method of Claim 14,

selecting the one of the multiple core networks to which the communication device attempts to connect using the information about multiple core networks sharing the common access network from which the system information message was received.

16. (Original) The method of Claim 14, obtaining an identity for the core network to which the communication device attempts to connect using the pointer information.

17. (Original) The method of Claim 14,
the system information including a common identity for the multiple core networks sharing the common access network,

attempting to connect to one of the multiple core networks sharing the common access network from which the system information was received upon satisfaction of a condition,

attempting to connect to a core network using the common identity when the condition is not satisfied.

18. (Original) A method in a communication device, the method comprising:

receiving system information,

the system information including a pseudo identity, the pseudo identity common to multiple core networks sharing common access network;

receiving multiple core network identities corresponding to the multiple core networks sharing the common access network in response to attempting to connect to a core network using the pseudo identity.

19. (Previously Presented) A method in a communication device, the method comprising:

receiving first system information from a first access network and receiving second system information from a second access network, the first system information including a first core network identity and information on how many core networks share the first access network, the second system information including a second core network identity,

selecting one of the first and second core network identities based on the number of core networks sharing the first access network.

20. (Original) The method of Claim 19,

weighting the first identity based on the number of core networks sharing the first access network,

weighting the second identity based on the number of core networks sharing the second access network,

selecting the one of the first and second identities based on the weighted first and second identities.

21. (Original) The method of Claim 19, selecting the one of the first and second identities randomly.

22. (Original) The method of Claim 19, selecting the one of the first and second identities only if the first and second access networks satisfy a quality condition.

23. (Original) The method of Claim 19,

the selected one of the first and second core network identities is a pseudo identity common to multiple core networks sharing the corresponding access network,

after selecting the core network identity, selecting one of the multiple core networks sharing the corresponding access network based on information in the corresponding system information.

24. (Original) The method of Claim 23, selecting the one of the multiple core networks without specifying the identity of the core network selected.

25. (Previously Presented) A method in a communication device, the method comprising:

receiving information about multiple core networks sharing a common access network,

the information including at least one of identities of at least some of the multiple core networks sharing the common access network, core network domain information, information on services supported by at least some of the multiple core networks sharing the common access network;

selecting a core network to which the communication device attempts to connect using the information received.

26. (Original) The method of Claim 25, receiving the information in response to an unsuccessful core network connection attempt.

27. (Previously Presented) A wireless communications system information message modulated on a radio frequency carrier, the communications system information message comprising:

an information block,

the information block including a data field for a number indicating how many core networks share a common access network.

28. (Previously Presented) The wireless communications system information message of Claim 27, the information block is a core network-identifying portion of the system information message.

29. (Previously Presented) The wireless communications system information message of Claim 27, the information block is devoid identities of core networks sharing the common access network.

30. (Previously Presented) A wireless communications system information message modulated on a radio frequency carrier, the communications system information message comprising:

an information block,

the information block including a pointer to a location where identities for multiple wireless communications core networks sharing a common access network may be obtained.

31. (Previously Presented) The wireless communications system information message of Claim 30, the information block is devoid identities of wireless communications core networks sharing the common access network.

32. (Previously Presented) A wireless communications system information broadcast message modulated on a radio frequency carrier, the communications system information broadcast message comprising:

an information block,

the information block including a pseudo network identity identifying multiple core networks sharing a common access network.

33. (Previously Presented) A wireless network connection request message modulated on a radio frequency carrier, the network connection request message comprising:

an information block,

the information block including a data field for indicating that a network entity may select, on behalf of a communication device, one of a plurality of core networks sharing a common access network.

34. (Original) A method in a communications network entity, the method comprising:

receiving preferred core network information from a communication device;

selecting a core network for the communication device;

giving consideration to the preferred core network information received from the communication device when selecting the core network for the communication device.

35. (Original) The method of Claim 34, receiving the at least one preferred core network from a communication device in a connection request from the communication device.

36. (Original) A method in a communications network entity, the method comprising:

receiving a communication device identity from a communication device;

selecting a core network from multiple core networks sharing a common access network for the communication device based on the communication device identity.

37. (Original) The method of Claim 36, at the network entity, receiving the communication device identity from the communication device in response to the network entity requesting the communication device identity.

38. (Original) The method of Claim 37, at the network entity, receiving a connection request from the communication device, requesting the communication device identity in response to receiving the connection request from the communication device.

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Evidence Appendix

(None)

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Related Proceedings Appendix

(None)